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10/800,828	03/15/2004	Ted C. Johnson	200315498-1	1371
22879 7590 04/29/2008 HEWLETT PACKARD COMPANY P O BOX 272400, 3404 E. HARMONY ROAD INTELLECTUAL PROPERTY ADMINISTRATION FORT COLLINS, CO 80527-2400				
EXAMINER MIRZADEGAN, SAIED S				
ART UNIT 2144		PAPER NUMBER		
NOTIFICATION DATE 04/29/2008		DELIVERY MODE ELECTRONIC		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary

Application No.

10/800,828

Applicant(s)

JOHNSON, TED C.

Examiner

SAEED S. MIRZADEGAN

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Period for Reply -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 January 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7, 9-13, 15-21, 23-25, 27, 28 and 30-34 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7, 9-13, 15-21, 23-25, 27, 28 and 30-34 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 14 January 2008 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Final Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Response to Amendment

1. This office action is in response to Applicant's amendment filed 1/14/2008.

Claims 1-7, 9-13, 15, 17-21, 23-25, 27, 28 and 30-34 are pending.

2. Applicant's Amendments, (see Amendments to Drawings and specifications filed 14 January 2008) with respect to Drawings have been fully considered and are persuasive. The Objections to Drawings has been withdrawn.

3. Applicant's Amendments with respect to claims 23-25 rejections under 35 U.S.C. 101 have been fully considered and are persuasive. It is noted that the examiner has interpreted "server computer" and "client computer" and "client/server systems" as hardware. The 35 U.S.C. 101 rejections of claims 23-25 have been withdrawn.

4. Applicant's arguments with respect to claims 1-7, 9-13, 15-21, 23-25, 27, 28 and 30-34 have been considered but are moot in view of the following new ground(s) of rejection.

Specification

5. The disclosure is objected to because of the following informalities: page 6, line 24 recites "server 221" where it should read "server 211".

Appropriate correction is required.

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

6. Claims 9-13, 21, 32 and 33 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.
7. The specification recites (page 13, ¶0053), "In addition, the scope of the invention admits of implementation, in whole or in part, by virtue of software programming. To that end, skilled practitioners recognize that embodiments may be realized in software (or in the combination of software and hardware) that may be executed on a host system, such as, for example, a computer system, a wireless device, or the like". It is evident that the limitations of the claimed invention can all be reasonably construed as encompassing embodiments which consist entirely of software. Software *per se*, in the absence of a structurally and functionally interrelated computer-readable medium, and/or hardware is not statutory subject matter. See MPEP 2106.01.
8. The Examiner recommends amending the claims to positively recite a structurally and functionally interrelated computer-readable medium and/or hardware in conjunction with the software components. As written, it is unclear as to whether the claims are drawn to software alone or combination of hardware and software.

Appropriate corrections are required.

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9. In order for software claims to be statutory, they must be claimed in combination with an appropriate medium and/or hardware to establish statutory category of invention and enable any functionality to be realized as set forth in MPEP 2106.01.

Software, *per se*:

The claims lack the necessary physical articles or objects to constitute a machine or a manufacture within the meaning of 35 USC 101. They are clearly not a series of steps or acts to be a process nor are they a combination of chemical compounds to be a composition of matter. As such, they fail to fall within a statutory category. They are, at best, functional descriptive material *per se*.

Descriptive material can be characterized as either "functional descriptive material" or "nonfunctional descriptive material." Both types of "descriptive material" are nonstatutory when claimed as descriptive material *per se*, 33 F.3d at 1360, 31 USPQ2d at 1759. When functional descriptive material is recorded on some computer-readable medium, it becomes structurally and functionally interrelated to the medium and will be statutory in most cases since use of technology permits the function of the descriptive material to be realized. Compare *In re Lowry*, 32 F.3d 1579, 1583-84, 32 USPQ2d 1031, 1035 (Fed. Cir. 1994)

Merely claiming nonfunctional descriptive material, i.e., abstract ideas, stored on a computer-readable medium, in a computer, or on an electromagnetic carrier signal, does not make it statutory. See *Diehr*, 450 U.S. at 185-86, 209 USPQ at 8 (noting that the claims for an algorithm in *Benson* were unpatentable as abstract ideas because "the sole practical application of the algorithm was in connection with the programming of a general purpose computer.").

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

10. Claims 1-3, 9, 10, 15, 17-19, 21, 23-25, 27, 28, 33, and 34 are rejected under 35 U.S.C. 103(a) as being rejected under 35 U.S.C. 103(a) as being unpatentable over Yarborough (Yarborough) U.S. PG. Pub. No. 2003/0065950 in view of Hipp (Hipp) U.S. Patent No. 6859835.

11. Regarding claim 1, Yarborough discloses a method comprising: detecting, at the server computer, a client connection at a first port (see e.g. page 1, ¶0008, lines 1-3); providing, by the server computer, the client with a decoy port number (see e.g. page 1, ¶0010, lines 24-25); and providing, by the server computer, services to the client on a second port having a second port number that is mapped to the decoy port number (see e.g. page 1, ¶0010, lines 14-21). However Yarborough does not explicitly teach: the second port number is different from the decoy port number.

12. In the same field of endeavor, Hipp teaches (see e.g. col. 6, lines 19-40).

13. It would have been obvious to one of ordinary skill in the networking art at the time the applicant's invention was made to combine Hipp's teachings as explained above with the teachings of Yarborough, for the purpose of (see Hipp, col. 2, lines 50-58). Yarborough provides motivation to do so, by enabling a FTP client and a FTP server in secured hardware arrangement using extremely few administrative resources (see Yarborough, page 3, ¶0029, lines 1-4).

14. Regarding claim 2, Yarborough-Hipp disclose the invention substantially as disclosed. Yarborough further discloses the decoy port number is provided to the client by the operation of a routine that is associated with the server (see e.g. page 1, ¶0010, lines 14-21).

15. Regarding claim 3, Yarborough-Hipp disclose the invention substantially as disclosed. Yarborough further discloses launching the server on the second port; and monitoring the second port for a connection by the client (see e.g. page 1, ¶0010, lines 14-21).

16. Claim 9 lists all the same elements of claim 1, but in a computer system form rather than method form. Therefore, the supporting rationale of the rejection to claim 1 applies equally as well to claim 9.

17. Regarding Claim 10, the limitations of claim 10 have already been addressed above in the method form as opposed to the system form of claim 3.

18. Claim 15 is substantially the same as claim 1 with the variation of having replicated the server application in the system and is thus rejected for reasons similar to those in rejecting claim 1. It would have been obvious to one of ordinary skill in the networking art at the time the applicant's invention was made to increase (i.e. double or triple) the number of server applications to increase the performance of the system.

19. Regarding Claim 17, Yarborough discloses the invention substantially as claimed. However, Yarborough does not explicitly teach: translating.

20. In the same field of endeavor, Hipp teaches (see e.g. col. 7, lines 2-7) translation.

21. It would have been obvious to one of ordinary skill in the networking art at the time the applicant's invention was made to combine Hipp's teachings as explained above with the teachings of Yarborough, for the purpose of (see Hipp, col. 2, lines 50-58). Yarborough provides motivation to do so, by enabling a FTP client and a FTP server in secured hardware arrangement using extremely few administrative resources (see Yarborough, page 3, ¶0029, lines 1-4).

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22. Regarding Claim 18, the limitations of claim 18 have already been addressed above.

23. Regarding Claim 19, the limitations of claim 19 have already been addressed above.

24. Claim 21 lists all the same elements of claim 1, but in a computer system form rather than method form. Therefore, the supporting rationale of the rejection to claim 1 applies equally as well to claim 21.

25. Claim 23 lists all the same elements of claim 1, but in a machine-readable storage medium that comprises instructions form rather than method form. Therefore, the supporting rationale of the rejection to claim 1 applies equally as well to claim 23.

26. Regarding Claim 24, the limitations of claim 24 have already been addressed above in the method form as opposed to a machine-readable storage medium that comprises instructions form.

27. Regarding Claim 25, the limitations of claim 25 have already been addressed above in the method form as opposed to a machine-readable storage medium that comprises instructions form.

28. Claim 27 lists all the same elements of claim 1, but in a client/server system form rather than method form. Therefore, the supporting rationale of the rejection to claim 1 applies equally as well to claim 27.

29. Regarding Claim 28, the limitations of claim 28 have already been addressed above in a machine-readable storage medium that comprises instructions form as opposed to a client/server system form.

30. Regarding claim 33, Yarborough-Hipp disclose the invention substantially as claimed. However, Yarborough does not explicitly teach: the decoy port number has no meaning to an unauthorized client computer, but the decoy port number is mappable to the second port number by an authorized client computer.

31. In the same field of endeavor, Hipp teaches (see e.g. col. 6, lines 19-40) since only the authorized client computer has the corresponding port translation table, the port number would not have any meaning to an unauthorized client.

32. It would have been obvious to one of ordinary skill in the networking art at the time the applicant's invention was made to combine Hipp's teachings as explained above with the teachings of Yarborough, for the purpose of (see Hipp, col. 2, lines 50-58). Yarborough provides motivation to do so, by enabling a FTP client and a FTP

server in secured hardware arrangement using extremely few administrative resources (see Yarborough, page 3, ¶0029, lines 1-4).

33. Regarding claim 34, Yarborough-Hipp disclose the invention substantially as claimed. However, Yarborough does not explicitly teach: the decoy port number is meaningless to an unauthorized client computer, but the decoy port number is mappable to the valid port number by an authorized client computer.

34. In the same field of endeavor, Hipp teaches (see e.g. col. 6, lines 19-40) since only the authorized client computer has the corresponding port translation table, the port number would not have any meaning to an unauthorized client.

35. It would have been obvious to one of ordinary skill in the networking art at the time the applicant's invention was made to combine Hipp's teachings as explained above with the teachings of Yarborough, for the purpose of (see Hipp, col. 2, lines 50-58). Yarborough provides motivation to do so, by enabling a FTP client and a FTP server in secured hardware arrangement using extremely few administrative resources (see Yarborough, page 3, ¶0029, lines 1-4).

Claim Rejections - 35 USC § 103

36. Claims 4-7, 11-13, 16, 31 and 32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yarborough in view of Hipp, further in view of Fan (Fan), US PG. Pub. No. 2004/0019689.

37. Regarding Claim 4, Yarborough-Hipp disclose the invention substantially as claimed. However, Yarborough does not explicitly teach: if there is no connection by the client within a predetermined time interval, terminating execution of the server on the second port.

38. In the same field of endeavor, Fan teaches (see e.g. page 2, ¶0019, lines 34-42).

39. It would have been obvious to one of ordinary skill in the networking art at the time the applicant's invention was made to combine Fan's teachings as explained above with the teachings of Yarborough-Hipp, for the purpose of (see Fan, page 2, ¶0017, lines 6-7). Yarborough provides motivation to do so, by enabling a FTP client and a FTP server in secured hardware arrangement using extremely few administrative resources (see Yarborough, page 3, ¶0029, lines 1-4).

40. Regarding Claim 5, Yarborough-Hipp disclose the invention substantially as claimed. However, Yarborough does not explicitly teach: maintaining a table of available decoy port numbers that are mapped to valid port numbers.

41. In the same field of endeavor, Fan teaches (see e.g. page 2, ¶0018, lines 15-17).

42. It would have been obvious to one of ordinary skill in the networking art at the time the applicant's invention was made to combine Fan's teachings as explained above with the teachings of Yarborough-Hipp, for the purpose of (see Fan, page 2, ¶0017, lines 6-7). Yarborough provides motivation to do so, by enabling a FTP client and a FTP server in secured hardware arrangement using extremely few administrative resources (see Yarborough, page 3, ¶0029, lines 1-4).

43. Regarding Claim 6, Yarborough-Hipp-Fan disclose the invention substantially as claimed. However, Yarborough does not explicitly teach: the table maintained in the server computer corresponds to a second table maintained at a client computer on which the client is executed, the second table mapping decoy numbers to valid port numbers at the client computer.

44. In the same field of endeavor, Hipp teaches (see e.g. Fig. 6, port translation tables 12 & 13 and col. 7, lines 2-7).

45. It would have been obvious to one of ordinary skill in the networking art at the time the applicant's invention was made to combine Hipp's teachings as explained above with the teachings of Yarborough, for the purpose of (see Hipp, col. 2, lines 50-58). Yarborough provides motivation to do so, by enabling a FTP client and a FTP

server in secured hardware arrangement using extremely few administrative resources (see Yarborough, page 3, ¶0029, lines 1-4).

46. Regarding claim 7, Yarborough-Hipp-Fan disclose the invention substantially as claimed. However, Yarborough does not explicitly teach: if there is no connection by the client within a predetermined time interval, terminating execution of the server on the second port.

47. In the same field of endeavor, Fan teaches (see e.g. page 2, ¶0018, lines 15-17).

48. It would have been obvious to one of ordinary skill in the networking art at the time the applicant's invention was made to combine Fan's teachings as explained above with the teachings of Yarborough-Hipp, for the purpose of (see Fan, page 2, ¶0017, lines 6-7). Yarborough provides motivation to do so, by enabling a FTP client and a FTP server in secured hardware arrangement using extremely few administrative resources (see Yarborough, page 3, ¶0029, lines 1-4).

49. Regarding Claim 11, the limitations of claim 11 have already been addressed above in the method form as opposed to the system form of claim 4.

50. Regarding Claim 12, the limitations of claim 12 have already been addressed above in the method form as opposed to the system form of claim 5.

51. Regarding Claim 13, the limitations of claim 13 have already been addressed above in the method form as opposed to the system form of claim 6.

52. Claim 16 is substantially the same as claim 7 with the variation of having replicated the server application in the system and thus replicating routines. Claim 16 is thus rejected for reasons similar to those in rejecting claim 7. It would have been obvious to one of ordinary skill in the networking art at the time the applicant's invention was made to increase (i.e. double or triple) the number of server applications thereby increasing (i.e. doubling or tripling) the routines to increase the performance of the system.

53. Regarding claim 31, Yarborough-Hipp-Fan disclose the invention substantially as claimed. However, Yarborough does not explicitly teach: providing the decoy port number that has no meaning to an unauthorized client computer, but the decoy port number is mappable to the second port number by an authorized client computer.

54. In the same field of endeavor, Hipp teaches (see e.g. col. 6, lines 19-40) since only the authorized client computer has the corresponding port translation table, the port number would not have any meaning to an unauthorized client.

55. It would have been obvious to one of ordinary skill in the networking art at the time the applicant's invention was made to combine Hipp's teachings as explained

above with the teachings of Yarborough, for the purpose of (see Hipp, col. 2, lines 50-58). Yarborough provides motivation to do so, by enabling a FTP client and a FTP server in secured hardware arrangement using extremely few administrative resources (see Yarborough, page 3, ¶0029, lines 1-4).

56. Regarding Claim 32, Yarborough-Hipp-Fan disclose the invention substantially as claimed. However, Yarborough does not explicitly teach: the decoy port number provided to the client enables the client to map, using a second table associated with the client, the decoy port number to the second port number such that the client can connect to the computer system at the second port number.

57. In the same field of endeavor, Hipp teaches (see e.g. Fig. 6, port translation tables 12 & 13 and col. 6, lines 19-40 and col. 7, lines 2-7).

58. It would have been obvious to one of ordinary skill in the networking art at the time the applicant's invention was made to combine Hipp's teachings as explained above with the teachings of Yarborough, for the purpose of (see Hipp, col. 2, lines 50-58). Yarborough provides motivation to do so, by enabling a FTP client and a FTP server in secured hardware arrangement using extremely few administrative resources (see Yarborough, page 3, ¶0029, lines 1-4).

Claim Rejections - 35 USC § 103

59. Claims 20, 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yarborough in view Hipp and further in view of Rueda et al. (Rueda) US. PG Pub. No. 2002/0112076.

60. Regarding Claim 20, Yarborough-Hipp discloses the invention substantially as claimed. However, Yarborough-Fan do not explicitly teach: mapping the decoy port number to an intermediate port number; and effecting an offset to the intermediate port number.

61. In the same field of endeavor, Rueda teaches (see e.g. page 22, ¶0306, lines 1-5 & Fig. 30) FTP.

62. It would have been obvious to one of ordinary skill in the networking art at the time the applicant's invention was made to combine Yarborough-Hipp's teachings as explained above with the teachings of Rueda, for the purpose of (see Yarborough, page 3, ¶0029, lines 1-4). Rueda provides motivation to do so, by allowing a network (client-side network) to have access to another network (the server-side or internet side) using IP-based protocols (see Rueda, page 4, ¶ 0041, lines 1-4).

63. Regarding Claim 30, Yarborough-Hipp discloses the invention substantially as claimed. However, Yarborough-Hipp do not explicitly teach: mapping the decoy port

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number to an intermediate port number; and effecting an offset to the intermediate port number.

64. In the same field of endeavor, Rueda teaches (see e.g. page 22, ¶0306, lines 1-5 & Fig. 30) FTP.

Prior Art of Record

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Please refer to form PTO-892 (Notice of Reference Cited) for a list of relevant prior art.

Conclusion

65. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

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the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to SAEED S. MIRZADEGAN whose telephone number is (571)270-3044. The examiner can normally be reached on M-F 8:00-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William Vaughn can be reached on 571-272-3922. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/S. S. M./

Examiner, Art Unit 2144

/William C. Vaughn, Jr./

Supervisory Patent Examiner, Art Unit 2144